

PATENT COOPERATION TREATY

PCT



INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 23 SEP 2005

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Applicant's or agent's file reference S87.WO.1.11	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/IB2004/003097	International filing date (day/month/year) 23.09.2004	Priority date (day/month/year) 25.09.2003
International Patent Classification (IPC) or national classification and IPC B65B25/00, B65B11/56, B65B59/04		
Applicant SACMI PACKAGING S.P.A.et al.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 3 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 22.07.2005	Date of completion of this report 26.09.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Grentzius, W Telephone No. +31 70 340-3728 

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**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/IB2004/003097

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

2-4 as originally filed
1 received on 28.07.2005 with letter of 20.07.2005

Claims, Numbers

1-12 received on 28.07.2005 with letter of 20.07.2005

Drawings, Sheets

1/3-3/3 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☒ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☒ the claims, Nos. 13-15
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/B2004/003097

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-12
	No: Claims	
Inventive step (IS)	Yes: Claims	1-12
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-12
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following document:

D1: DE 423 693 C (LAUENSTEIN & CO G M B H FA) 2 October 1926 (1926-10-02)

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1 and shows an outlet device for chocolates comprising a belt and a rolling means for rolling the wrapped chocolates.

The subject-matter of claim 1 differs from this known outlet device in that it comprises second belt means for moving wrapped chocolates that do not require rolling, the rolling means being detachably mounted between the opposed first and second belts.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may be regarded as providing a device which permits to either roll chocolates in their wrapper or to move them without rolling.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT), because there is no suggestion in the available prior art to use two belts and detachable rolling means in the way defined in claim 1, to allow two modes of operation.

Claims 2-12 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

OUTLET DEVICE FOR CHOCOLATES AND THE LIKE

TECHNICAL FIELD

The present invention relates to technical field of automatic packaging machines, and particularly the invention relates to an outlet device for chocolates or the like for a wrapping machine.

BACKGROUND ART

In the known wrapping machines, the outlet device provides to carry the products, either partially or completely wrapped, from the folding stations to the outlet area, for in-line connection to a subsequent packaging machine or collection within suitable containers.

In the case of products having the shape of a solid of revolution, such as small eggs or spheres, depending on the type of wrap to be manufactured, for example "rolled design", with single-, double-end fantail twist, a specific outlet unit is required to be assembled on the wrapping machine respectively capable of carrying the products to the outlet in an ordinate manner while rolling them to complete the wrap thereof with a fancy design, and moving them simply to the outlet according to the so-called "in bulk" mode.

The drawback with these known wrapping machines is that the assembly of the suitable outlet device for manufacturing a particular wrap type is complicated, and this entails both an increase in the machine downtime and the interruption of the production process, as well as having to resort to skilled labour required to carry out these expensive operations.

Packaging machines are known in which two separate and different outlet devices are provided, which are located in two different positions and operated separately, based on the type of wrap of the product. Due to the simultaneous presence of both devices, the outlet device does not require to be replaced each time the type of wrap is changed, however separate motors are required, with a consequent larger machine size, more complicated construction and hence an increase in the machine total costs.

Document DE 423 693 C discloses an outlet device for chocolates comprising first belt means to move the products to be rolled and operated by actuating means, and rolling means facing the first belt means.

DISCLOSURE OF THE INVENTION

CLAIMS

1) Outlet device for chocolates and the like (100) for a wrapping machine (50) provided with at least moving means (51) for each product (100), said device (1) comprising first belt means (2) to move the products (100) to be rolled and operated by actuating means (10), and rolling means (4) facing the first belt means (2); said device (1) being characterized in that the first belt means (2) are operated by the actuating means (10) by means of first connecting means (5), connecting the belt means (2) to the actuating means (10), according to a first direction (A) of a rotary motion by said actuating means (10); the rolling means (4) are intended to roll the products (100) being moved by said first belt means (2); said device (1) comprising second belt means (3) to move those products (100) that do not require being rolled and operated by actuating means (10) through second connecting means (6) according to the second direction (B) of rotation of said actuating means (10); the rolling means (4) are detachable and interposed between the first (2) and second (3) belt means; the rolling means (4) comprise an elongated concave housing (8), complementary shaped relative to the products (100), which is intended to roll said products (100) being moved by the first belt means (2) which~~that~~ are placed above the second belt means (3).

2) Device according to claim 1 characterized in that the first (5) and second (6) connecting means comprise respective idle wheels gripping in the first (A) and second (B) direction of rotation of the actuating means (10), respectively.

3) Device according to claim 1 characterized in that the first (5) and second (6) connecting means are of the electromagnetic type and are operated by supplying means of the actuating means (10).

4) Device according to claim 1 characterized in that the first (5) and second (6) connecting means are connected to actuating means (10) through driving means (7).

5) Device according to claim 4 characterized in that the driving means (7) comprise a closed loop flexible element or a gear chain.

- 6) Device according to claim 1 characterized in that it comprises extraction means (15) intended to take each single product (100) from the moving means (51) and carry it to the belt means (2, 3).
- 5
- 7) Device according to claim 6 characterized in that the extraction means (15) comprise a pusher (16) being provided with a shaped housing for the product (100) and operated by operating means (17).
- 10
- 8) Device according to claim 7 characterized in that the operating means (17) comprise a couple of levers (18, 19), at least one of which being motor-driven, connected to the pusher (16) to form an articulated quadrilateral.
- 15
- 9) Device according to claim 1 characterized in that the actuating means (10) consist of an electric motor.
- 10) Device according to claim 1 characterized in that the first belt means (2) comprise at least one endless timing belt, which is coated on the outside relative to the teeth with a layer of elastic material (13).
- 20
- 11) Device according to claim 1 characterized in that the second belt means (3) comprise at least one endless belt.
- 25
- 12) Device according to any of the preceding claim characterized in that it comprises calculation and control means to control the phase relationship thereof at least between the extraction means (15) and the moving means (51).